SUPERSCOPE ®

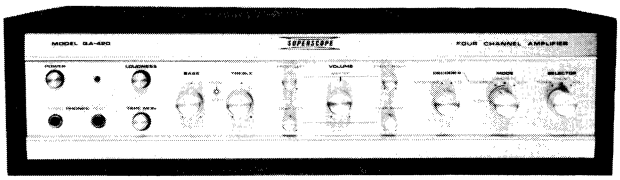
SOLID STATE
4-CHANNEL AMPLIFIER

Model QA—420

SERVICE DATA

— July 1972 —

SUPERSCOPE INC.
8150 VINELAND AVENUE,
SUN VALLEY, CALIFORNIA, USA 91352



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TECHNICAL SPECIFICATIONS

Instantaneous Peak Music Power
- 4-channel operation ..... 56W at 8 ohms
- 2-channel operation ..... 70W at 8 ohms

E.I.A. Total Music Power
- 4-channel operation ..... 40W at 8 ohms
- 2-channel operation ..... 50W at 8 ohms

Total Music Power (IHF)
- 4-channel operation ..... 30W at 8 ohms
- 2-channel operation ..... 35W at 8 ohms

Continuous Power (R M S)
- **4-channel operation ..... 50W x 4 at 8 ohms**
- **2-channel operation ..... 15W x 15W at 8 ohms**

Total Harmonic Distortion (3W) 0.3%
Power Bandwidth (THD 1%, IHF) ..... 30HZ – 20 KHz
Input Sensitivity (5.5W)
- PHONO (MAG) 2.5mV
- (CER) 200mV
- AUX 130mV

Input Impedance
- PHONO ..... 47K ohm
- AUX ..... 100K ohm

Signal to Noise Ratio (IHF)
- PHONO ..... 60 dB
- AUX ..... 70 dB

Frequency Response (RIAA) ..... ±1 dB
Bass Control at 100 Hz ..... ±10 dB
Treble Control at 10 KHz ..... ±10 dB
Loudness at 100 Hz ..... +9 dB
at 10 KHz ..... +2.5 dB
Channel Separation at 100 Hz ..... 40 dB
at 10 KHz ..... 35 dB
Power Requirements
- Power Voltage ..... AC 120V 50/60 Hz
- Power Consumption 100W

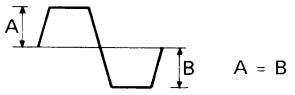
Dimensions ..... 4-33/64"(H) x 16-23/32"(W) x 10-33/64"(D)
Weight ..... 16.5 lbs

*These specifications and exterior designs may be changed for improvement without notice.

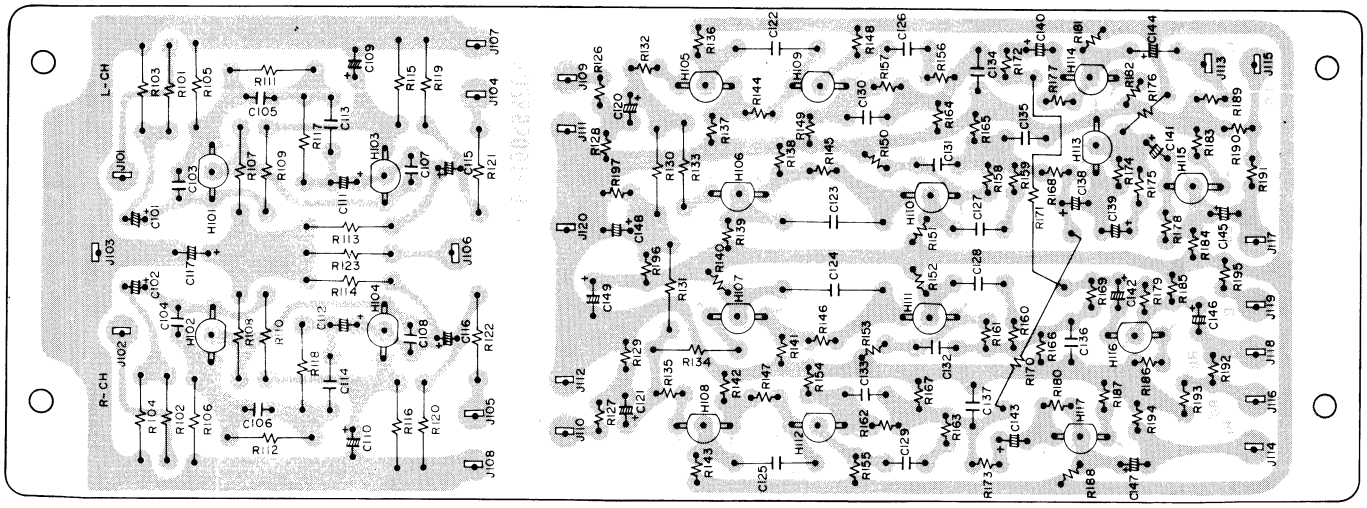
ALIGNMENT PROCEDURE

1. Set the volume control at maximum, BASS TREBLE controls at mechanical center-position, while switching the TAPE MON and LOUDNESS control switches off.
2. Connect 8 ohms dummy load resistor (10 ~ 20W, noninductive preferably) to each FRONT L and R, REAR L and R channel SPEAKERS terminals of the unit.

SELECTOR switch in the position "AUX"
MODE Switch in the "4 CH"

Signal Source Connection	Signal Frequency	Indicator Connection	Adjustment
Audio Generator to AUX terminal	1,000 Hz	Oscilloscope to output terminal	Gradually increase output level of the audio generator and adjust. R451, R452, R453 and R454 for symmetrical clipping level. 

CIRCUIT BOARD DIAGRAM (TOP VIEW)

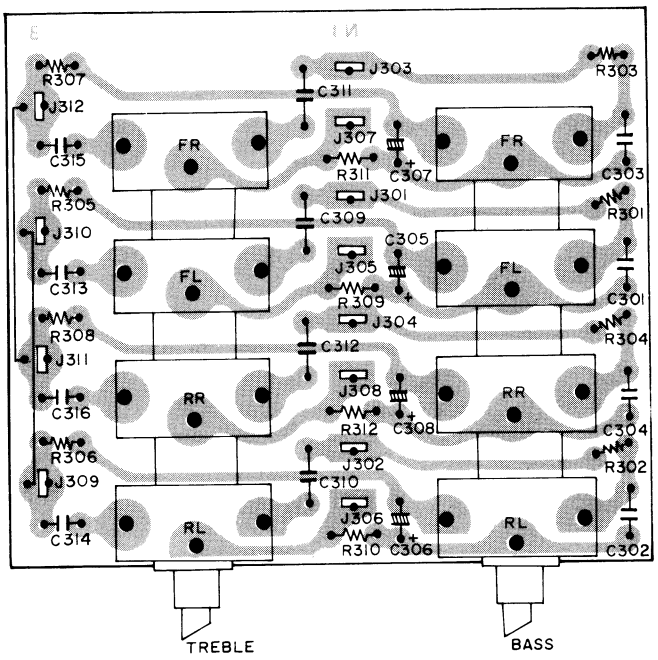


EQ Amp. and SQ Decoder Block

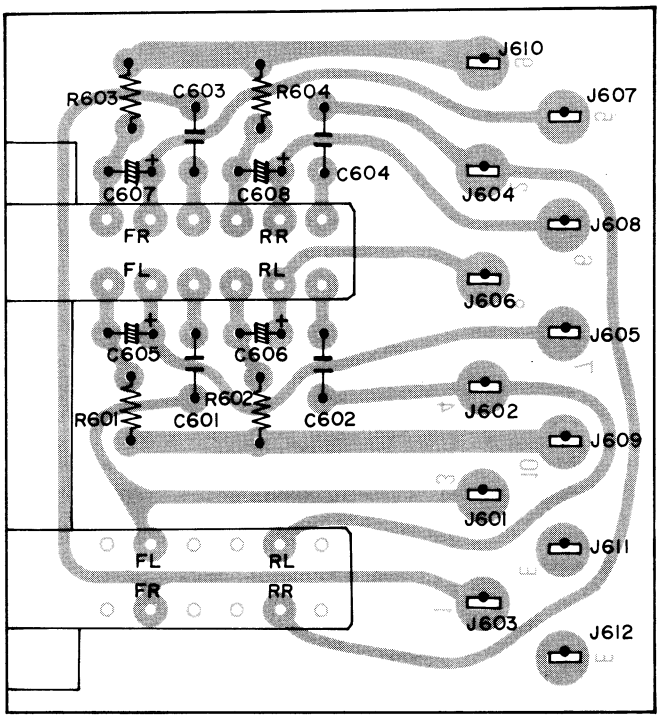
Pre-amp. Block (Right F,R Channel)

Pre-amp. Block (Left F,R Channel)

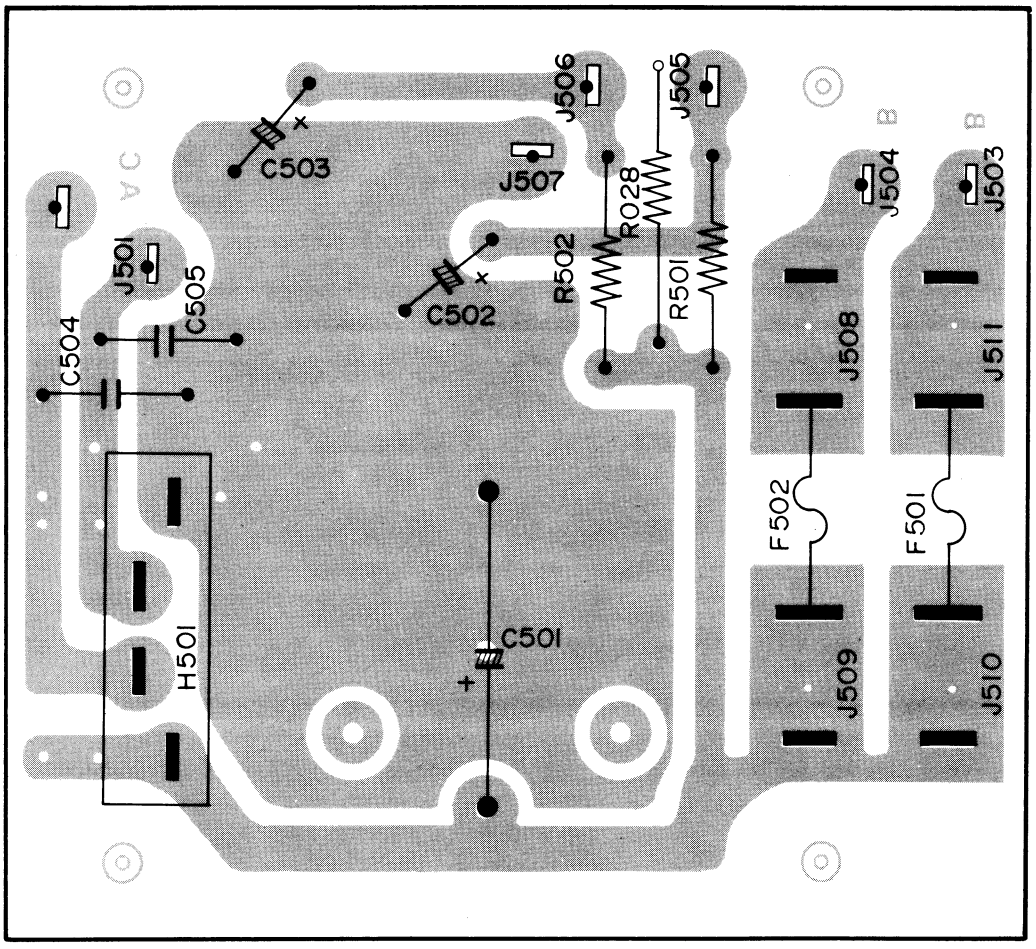
Main Amp. Block



Tone Amp. Block

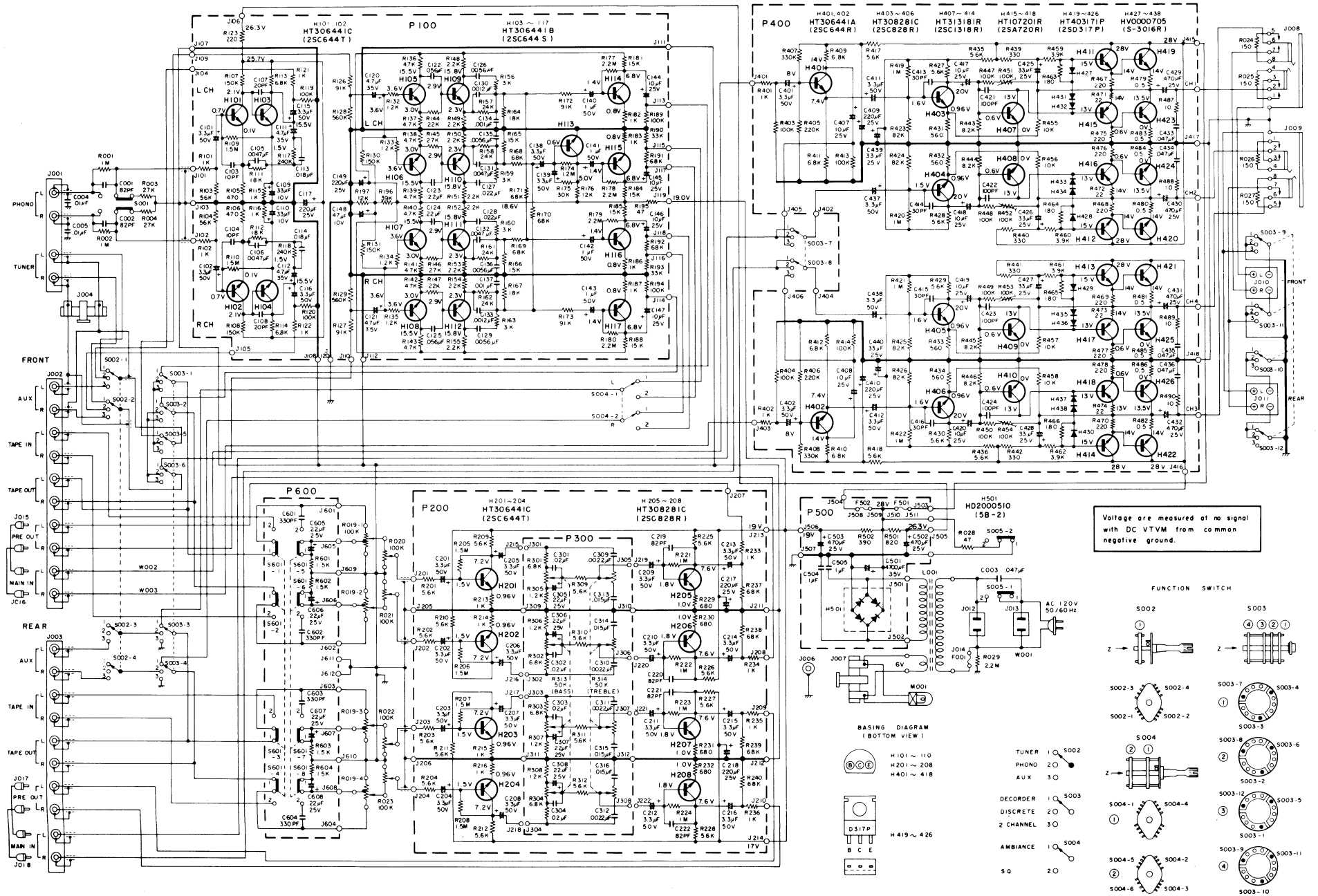


Loudness and Tape Monitor Block

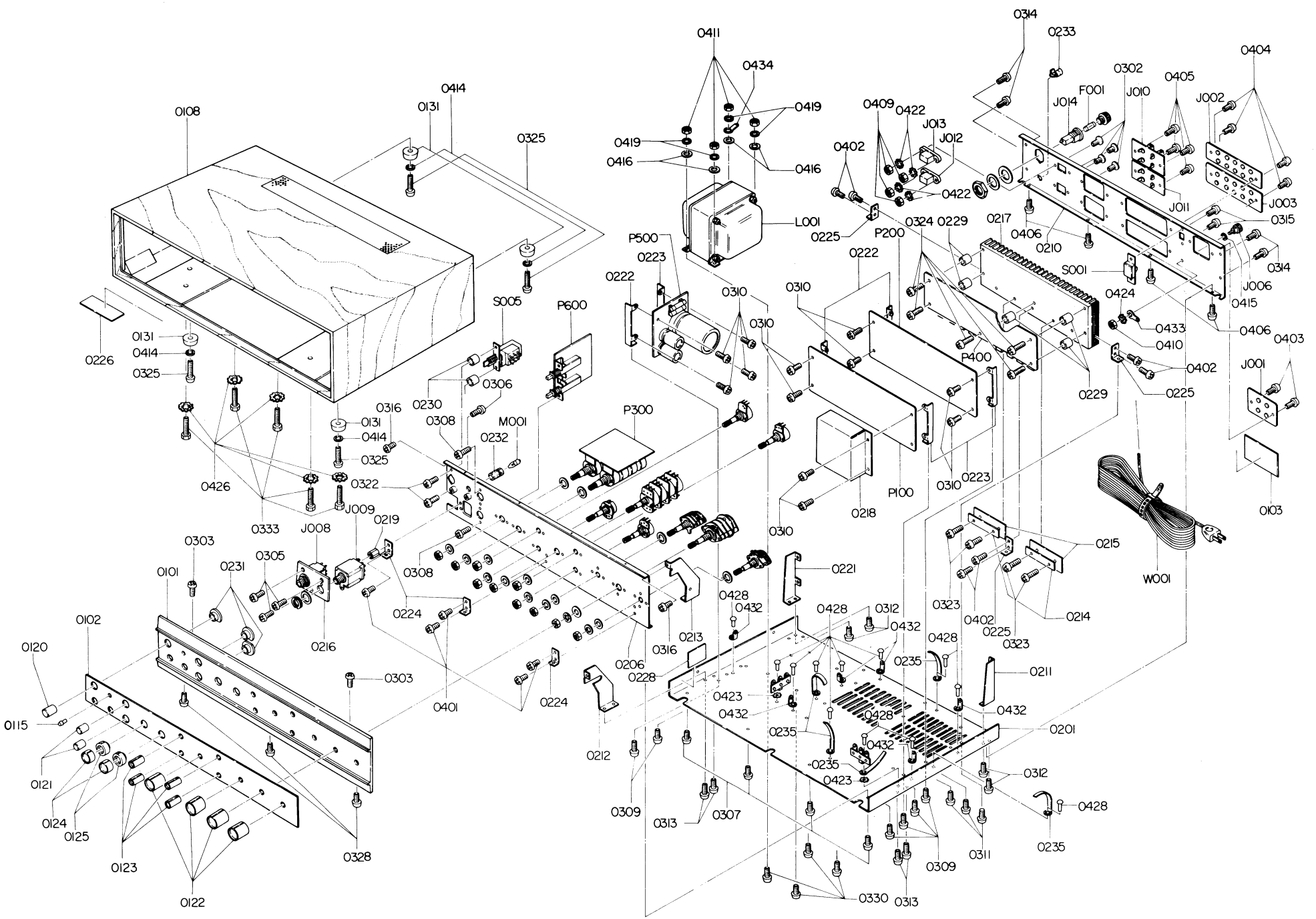


Power Source Block

SCHEMATIC DIAGRAM



EXPLODED DIAGRAM OF THE MECHANISM



PARTS LIST

REF. DESIG.	PART NO.	DESCRIPTION
		MECHANICAL PARTS
*	286506340	Escutheon Assembly
0101	286506301	Escutheon
0102	286506302	Escutheon
0115	284505301	Cover
0231	282225902	Bush x 3
0103	286526501	Indicator
0108	286506450	Case K
0109	286506401	Case
0110	257000301	Punched Plate
0120	286515401	Knob (Power)
0121	286515402	Knob (Loudness, Tape Mon) x 2
0122	286415404	Knob (Selector, Mode, Synthesizer, Volume) x 4
0123	286315401	Knob (Front, Rear) x 4
0124	286315402	Knob (Bass, Treble) x 2
0125	286315403	Knob (Bass, Treble) x 2
0131	286405701	Leg x 4
0201	284510502	Chassis
0206	286516050	Bracket K
0207	284516001	Bracket
0208	286510101	Support x 2
0210	284516002	Bracket
0211	284516003	Bracket
0212	284516005	Bracket
0213	284516006	Bracket
0214	284500501	Clamper x 2
0215	284511801	Spacer x 2
0216	284512001	Insulator
0217	284526701	Heat Sink
0218	284510901	Shield
0219	284510101	Support
0221	269216002	Bracket
0222	326716003	Bracket x 3
0223	326716004	Bracket x 3
0224	326716005	Bracket x 3
0225	326716005	Bracket x 3
0226	257886101	Caution Label
0228	280312001	Insulator
0229	203410101	Support x 5
0230	380205501	Collar x 2
0232	306925901	Bush
0233	145525901	Bush
0235	138200503	Clamper x 5
0302	51042608E	F.H.M. Screw x 4
0303	51102605E	B.H.M. Screw x 2
0305	51060304A	P.H.M. Screw x 3
0306	51060304A	P.H.M. Screw
0307	51060305A	P.H.M. Screw x 4
0308	51060305A	P.H.M. Screw x 2
0309	51060305A	P.H.M. Screw x 6
0310	51060305A	P.H.M. Screw x 12
0311	51060305A	P.H.M. Screw x 3
0312	51060305A	P.H.M. Screw x 4
0313	51060305A	P.H.M. Screw x 4
0314	51060305E	P.H.M. Screw x 4
0315	51060305E	P.H.M. Screw x 2
0316	51060305A	P.H.M. Screw x 2
0322	51060310A	P.H.M. Screw x 2
0323	51060310A	P.H.M. Screw x 4
0324	51060314A	P.H.M. Screw x 5
0325	51100320A	B.H.M. Screw x 4
0328	51100305E	B.H.M. Screw x 3
0330	51060408A	P.H.M. Screw x 4
0333	52010420A	H. Head Bolt x 5

REF. DESIG.	PART NO.	DESCRIPTION
0401	51570306B	P. Tapt Screw x 5
0402	51570306B	P. Tapt Screw x 6
0403	51570306B	P. Tapt Screw x 2
0404	51570306B	P. Tapt Screw x 4
0405	51570306B	P. Tapt Screw x 4
0406	51570306B	P. Tapt Screw x 4
0409	53112603E	Hexagon Nut x 4
0410	53110303E	Hexagon Nut
0411	53110403E	Hexagon Nut x 4
0414	54020301E	Flat Washer P x 4
0415	54020301E	Flat Washer P
0416	54020401E	Flat Washer P x 4
0419	54040402A	Spring Washer x 4
0422	54052600R	T.L. Washer OR x 4
0423	54050300R	T.L. Washer OR x 2
0424	54050300R	T. L. Washer OR
0426	54080400R	T. L. Washer RR x 5
0428	55060305 I	T. R. Rivet x 12
0432	62031340W	Lug x 6
0433	62031340W	Lug
0434	62041760W	Lug
		ELECTRICAL PARTS
P100	YD2865001	P.C. Board
		RESISTORS **All resistors are ±10% 1/4W and carbon type, unless otherwise indicated.**
R101	RT1010214	1 KΩ
R102	RT1010214	1 KΩ
R103	RT1056314	56 KΩ
R104	RT1056314	56 KΩ
R105	RT1047114	470 Ω
R106	RT1047114	470 Ω
R107	RT1015414	150 KΩ
R108	RT1015414	150 KΩ
R109	RT1015514	1.5 MΩ
R110	RT1015514	1.5 MΩ
R111	RT0518314	18 KΩ, ±5%, 1/4W
R112	RT0518314	18 KΩ, ±5%, 1/4W
R113	RT1068214	6.8 KΩ
R114	RT1068214	6.8 KΩ
R115	RT1010214	1 KΩ
R116	RT1010214	1 KΩ
R117	RT0524414	240 KΩ ±5%, 1/4W
R118	RT0524414	240 KΩ, ±5%, 1/4W
R119	RT1010414	100 KΩ
R120	RT1010414	100 KΩ
R121	RT1010214	1 KΩ
R122	RT1010214	1 KΩ
R123	RT1022114	220 KΩ
R126	RT0591314	91 KΩ, ±5%, 1/4W
R127	RT0591314	91 KΩ, ±5%, 1/4W
R128	RT1056414	560 KΩ
R129	RT1056414	560 KΩ
R130	RT1015414	150 KΩ
R131	RT1015414	150 KΩ
R132	RT1012214	1.2 KΩ
R133	RT1012214	1.2 KΩ
R134	RT1012214	1.2 KΩ
R135	RT1012214	1.2 KΩ
R136	RT1047214	4.7 KΩ
R137	RT1047214	4.7 KΩ
R138	RT1047214	4.7 KΩ

REF. DESIG.	PART NO.	DESCRIPTION
R139	RT1047214	4.7 KΩ
R140	RT1047214	4.7 KΩ
R141	RT1047214	4.7 KΩ
R142	RT1047214	4.7 KΩ
R143	RT1047214	4.7 KΩ
R144	RT0522314	22 KΩ, ±5%, 1/4W
R145	RT0527314	27 KΩ, ±5%, 1/4W
R146	RT0527314	27 KΩ, ±5%, 1/4W
R147	RT0522314	22 KΩ, ±5%, 1/4W
R148	RT1022214	2.2 KΩ
R149	RT1022214	2.2 KΩ
R150	RT1022214	2.2 KΩ
R151	RT1022214	2.2 KΩ
R152	RT1022214	2.2 KΩ
R153	RT1022214	2.2 KΩ
R154	RT1022214	2.2 KΩ
R155	RT1022214	2.2 KΩ
R156	RT0530214	3 KΩ, ±5%, 1/4W
R157	RT0524314	24 KΩ, ±5%, 1/4W
R158	RT0524314	24 KΩ, ±5%, 1/4W
R159	RT0530214	3 KΩ, ±5%, 1/4W
R160	RT0530214	3 KΩ, ±5%, 1/4W
R161	RT0524314	24 KΩ, ±5%, 1/4W
R162	RT0524314	24 KΩ, ±5%, 1/4W
R163	RT0530214	3 KΩ, ±5%, 1/4W
R164	RT0518314	18 KΩ, ±5%, 1/4W
R165	RT0515314	15 KΩ, ±5%, 1/4W
R166	RT0515314	15 KΩ, ±5%, 1/4W
R167	RT0518314	18 KΩ, ±5%, 1/4W
R168	RT0568314	68 KΩ, ±5%, 1/4W
R169	RT0568314	68 KΩ, ±5%, 1/4W
R170	RT0568314	68 KΩ, ±5%, 1/4W
R171	RT0568314	68 KΩ, ±5%, 1/4W
R172	RT0591314	91 KΩ, ±5%, 1/4W
R173	RT0591314	91 KΩ, ±5%, 1/4W
R174	RT1012514	1.2 KΩ,
R175	RT0530314	30 KΩ, ±5%, 1/4W
R176	RT1012314	12 KΩ
R177	RT1022514	2.2 MΩ
R178	RT1022514	2.2 MΩ
R179	RT1022514	2.2 MΩ
R180	RT1022514	2.2 MΩ
R181	RT1015314	15 KΩ
R182	RT1010214	1 KΩ
R183	RT1010214	1 KΩ
R184	RT1015314	15 KΩ
R185	RT1015314	15 KΩ
R186	RT1010214	1 KΩ
R187	RT1010214	1 KΩ
R188	RT1015314	15 KΩ
R189	RT1010414	100 KΩ
R190	RT1033314	33 KΩ
R191	RT1068314	68 KΩ
R192	RT1068314	68 KΩ
R193	RT1033314	33 KΩ
R194	RT1010414	100 KΩ
R195	RT1047014	47 KΩ
R196	RT1039314	39 KΩ
R197	RT1012314	12 KΩ
		CAPACITORS
C101	EA3350509	Elect., 3.3μF, 50V
C102	EA3350509	Elect., 3.3μF, 50V
C103	DD1610001	Cer., 10pF, ±10%
C104	DD1610001	Cer., 10pF, ±10%
C105	DF1647201	Mylar, 0.0047μF, ±10%
C106	DF1647201	Mylar, 0.0047μF, ±10%
C107	DD1620001	Cer., 20pF, ±10%

REF. DESIG.	PART NO.	DESCRIPTION
C108	DD1620001	Cer., 20pF, ±10%
C109	EA3360109	Elect., 33μF, 10V
C110	EA3360109	Elect., 33μF, 10V
C111	EA4750359	Elect., 4.7μF, 35V
C112	EA4750359	Elect., 4.7μF, 35V
C113	DF1618301	Mylar, 0.018μF, ± 10%
C114	DF1618301	Mylar, 0.018μF, ± 10%
C115	EA3350509	Elect., 3.3μF, 50V
C116	EA3350509	Elect., 3.3μF, 50V
C117	EA2270259	Elect., 220μF, 25V
C120	EA4750359	Elect., 4.7μF, 35V
C121	EA4750359	Elect., 4.7μF, 35V
C122	DF1556305	Mylar, 0.056μF, ± 5%, 50V
C123	DF1622405	Mylar, 0.22μF, ± 10%, 50V
C124	DF1622405	Mylar, 0.22μF, ± 10%, 50V
C125	DF1556305	Mylar, 0.0056μF, ± 5%, 50V
C126	DF1556205	Mylar, 0.0056μF, ± 5%, 50V
C127	DF1522305	Mylar, 0.022μF, ± 5%, 50V
C128	DF1522305	Mylar, 0.022μF, ± 5%, 50V
C129	DF1556205	Mylar, 0.0056μF, ± 5%, 50V
C130	DF1512205	Mylar, 0.0012μF, ± 5%, 50V
C131	DF1547205	Mylar, 0.0047μF, ± 5%, 50V
C132	DF1547205	Mylar, 0.0047μF, ± 5%, 50V
C133	DF1512205	Mylar, 0.0012μF, ± 5%, 50V
C134	DF1510205	Mylar, 0.001μF, ± 5%, 50V
C135	DF1556205	Mylar, 0.0056μF, ± 5%, 50V
C136	DF1556205	Mylar, 0.0056μF, ± 5%, 50V
C137	DF1510205	Mylar, 0.001μF, ± 5%, 50V
C138	EA3350509	Elect., 3.3μF, 50V
C139	EA3350509	Elect., 3.3μF, 50V
C140	EA1050509	Elect., 1μF, 50V
C141	EA1050509	Elect., 1μF, 50V
C142	EA1050509	Elect., 1μF, 50V
C143	EA1050509	Elect., 1μF, 50V
C144	EA1060259	Elect., 10μF, 25V
C145	EA1060259	Elect., 10μF, 25V
C146	EA1060259	Elect., 10μF, 25V
C147	EA1060259	Elect., 10μF, 25V
C148	EA4760109	Elect., 47μF, 10V
C149	EA2270259	Elect., 220μF, 25V
		SEMICONDUCTORS
H101	HT306441C	Transistor, 2SC644(T)
H102	HT306441C	Transistor, 2SC644(T)
H103	HT306441B	Transistor, 2SC644(S)
H104	HT306441B	Transistor, 2SC644(S)
H105	HT306441B	Transistor, 2SC644(S)
H106	HT306441B	Transistor, 2SC644(S)
H107	HT306441B	Transistor, 2SC644(S)
H108	HT306441B	Transistor, 2SC644(S)
H109	HT306441B	Transistor, 2SC644(S)
H110	HT306441B	Transistor, 2SC644(S)
H111	HT306441B	Transistor, 2SC644(S)
H112	HT306441B	Transistor, 2SC644(S)
H113	HT306441B	Transistor, 2SC644(S)
H114	HT306441B	Transistor, 2SC644(S)
H115	HT306441B	Transistor, 2SC644(S)
H116	HT306441B	Transistor, 2SC644(S)
H117	HT306441B	Transistor, 2SC644(S)
		MISCELLANEOUS
J101	YP1000099	Plug
J102	YP1000099	Plug
J103	YP1000099	Plug
J104	YP1000099	Plug
J105	YP1000099	Plug
J106	YP1000099	Plug
J107	YP1000099	Plug

REF. DESIG.	PART NO.	DESCRIPTION
J108	YP1000099	Plug
J109	YP1000099	Plug
J110	YP1000099	Plug
J111	YP1000099	Plug
J112	YP1000099	Plug
J113	YP1000099	Plug
J114	YP1000099	Plug
J115	YP1000099	Plug
J116	YP1000099	Plug
J117	YP1000099	Plug
J118	YP1000099	Plug
J119	YP1000099	Plug
J120	YP1000099	Plug
P200	YD2845002	P.C. Board
		RESISTORS
		All resistors are ±10%, 1/4W and carbon type, unless otherwise indicated.
R201	RT1056214	5.6 KΩ
R202	RT1056214	5.6 KΩ
R203	RT1056214	5.6 KΩ
R204	RT1056214	5.6 KΩ
R205	RN1015514	1.5 MΩ
R206	RN1015514	1.5 MΩ
R207	RN1015514	1.5 MΩ
R208	RN1015514	1.5 MΩ
R209	RT1056214	5.6 KΩ
R210	RT1056214	5.6 KΩ
R211	RT1056214	5.6 KΩ
R212	RT1056214	5.6 KΩ
R213	RT1010214	1 KΩ
R214	RT1010214	1 KΩ
R215	RT1010214	1 KΩ
R216	RT1010214	1 KΩ
R221	RN1010514	1 MΩ
R222	RN1010514	1 MΩ
R223	RN1010514	1 MΩ
R224	RN1010514	1 MΩ
R225	RT1056214	5.6 KΩ
R226	RT1056214	5.6 KΩ
R227	RT1056214	5.6 KΩ
R228	RT1056214	5.6 KΩ
R229	RT1068114	680Ω
R230	RT1068114	680Ω
R231	RT1068114	680Ω
R232	RT1068114	680Ω
R233	RT1010214	1 KΩ
R234	RT1010214	1 KΩ
R235	RT1010214	1 KΩ
R236	RT1010214	1 KΩ
R237	RT1068314	68 KΩ
R238	RT1068314	68 KΩ
R239	RT1068314	68 KΩ
R240	RT1068314	68 KΩ
		CAPACITORS
C201	EA3350509	Elect., 3.3μF 50V
C202	EA3350509	Elect., 3.3μF, 50V
C203	EA3350509	Elect., 3.3μF, 50V
C204	EA3350509	Elect., 3.3μF, 50V
C205	EA3350509	Elect., 3.3μF, 50V
C206	EA3350509	Elect., 3.3μF, 50V
C207	EA3350509	Elect., 3.3μF, 50V
C208	EA3350509	Elect., 3.3μF, 50V
C209	EA3350509	Elect., 3.3μF, 50V

REF. DESIG.	PART NO.	DESCRIPTION
C210	EA3350509	Elect., 3.3μF, 50V
C211	EA3350509	Elect., 3.3μF, 50V
C212	EA3350509	Elect., 3.3μF, 50V
C213	EA3350509	Elect., 3.3μF, 50V
C214	EA3350509	Elect., 3.3μF, 50V
C215	EA3350509	Elect., 3.3μF, 50V
C216	EA3350509	Elect., 3.3μF, 50V
C217	EA2270259	Elect., 220μF, 25V
C218	EA2270259	Elect., 220μF, 25V
C219	DD1582001	Cer., 82pF, ±5%
C220	DD1582001	Cer., 82pF, ±5%
C221	DD1582001	Cer., 82pF, ±5%
C222	DD1582001	Cer,, 82pF, ±5%
		SEMICONDUCTORS
H201	HT306441C	Transistor, 2SC644(T)
H202	HT306441C	Transistor, 2SC644(T)
H203	HT306441C	Transistor, 2SC644(T)
H204	HT306441C	Transistor, 2SC644(T)
H205	HT308281C	Transistor, 2SC828(R)
H206	HT308281C	Transistor, 2SC828(R)
H207	HT308281C	Transistor, 2SC828(R)
H208	HT308281C	Transistor, 2SC828(R)
		MISCELLANEOUS
J201	YP1000091	Plug
J202	YP1000091	Plug
J203	YP1000091	Plug
J204	YP1000091	Plug
J205	YP1000091	Plug
J206	YP1000091	Plug
J207	YP1000091	Plug
J208	YP1000091	Plug
J209	YP1000091	Plug
J210	YP1000091	Plug
J211	YP1000091	Plug
J212	YP1000091	Plug
J213	YP1000091	Plug
J214	YP1000091	Plug
J215	YP1000091	Plug
P300	YD2845003	P.C. Board
		RESISTORS
		All resistors are ±10%, 1/4W and carbon type, unless otherwise indicated.
R301	RT1068214	6.8 KΩ
R302	RT1068214	6.8 KΩ
R303	RT1068214	6.8 KΩ
R304	RT1068214	6.8 KΩ
R305	RT1012214	1.2 KΩ
R306	RT1012214	1.2 KΩ
R307	RT1012214	1.2 KΩ
R308	RT1012214	1.2 KΩ
R309	RT1056214	5.6 KΩ
R310	RT1056214	5.6 KΩ
R311	RT1056214	5.6 KΩ
R312	RT1056214	5.6 KΩ
R313	RU0503002	Variable, 50 KΩ(D)
R314	RU0503002	Variable, 50 KΩ(D)
		CAPACITORS
C301	DF1722301	Mylar, 0.02μF, ±20%
C302	DF1722301	Mylar, 0.02μF, ±20%
C303	DF1722301	Mylar, 0.02μF, ±20%
C304	DF1722301	Mylar, 0.02μF, ±20%
C305	EM2240251	Elect., 0.22μF, 25V

REF. DESIG.	PART NO.	DESCRIPTION
C306	EM2240251	Elect., 0.22μF, 25V
C307	EM2240251	Elect., 0.22μF, 25V
C308	EM2240251	Elect., 0.22μF, 25V
C309	DF1722201	Mylar, 0.0022μF, ±20%
C310	DF1722201	Mylar, 0.0022μF, ±20%
C311	DF1722201	Mylar, 0.0022μF, ±20%
C312	DF1722201	Mylar, 0.0022μF, ±20%
C313	DF1715301	Mylar, 0.015μF, ±20%
C314	DF1715301	Mylar, 0.015μF, ±20%
C315	DF1715301	Mylar, 0.015μF, ±20%
C316	DF1715301	Mylar, 0.015μF, ±20%
		MISCELLANEOUS
J301	YP1000099	Plug
J302	YP1000099	Plug
J303	YP1000099	Plug
J304	YP1000099	Plug
J305	YP1000099	Plug
J306	YP1000099	Plug
J307	YP1000099	Plug
J308	YP1000099	Plug
J309	YP1000099	Plug
J310	YP1000099	Plug
J311	YP1000099	Plug
J312	YP1000099	Plug
P400	YD2845004	P.C. Board
		RESISTORS **All resistors are ±10%, 1/4W and carbon type unless otherwise indicated.**
R401	RT1010214	1 KΩ
R402	RT1010214	1 KΩ
R403	RT1010414	100 KΩ
R404	RT1010414	100 KΩ
R405	RT1022414	220 KΩ
R406	RT1022414	220 KΩ
R407	RT1033414	330 KΩ
R408	RT1033414	330 KΩ
R409	RT1068214	6.8 KΩ
R410	RT1068214	6.8 KΩ
R411	RT1068214	6.8 KΩ
R412	RT1068214	6.8 KΩ
R413	RT1010414	100 KΩ
R414	RT1010414	100 KΩ
R417	RT1056214	5.6 KΩ
R418	RT1056214	5.6 KΩ
R419	RN1010514	1 MΩ
R420	RN1010514	1 MΩ
R421	RN1010514	1 MΩ
R422	RN1010514	1 MΩ
R423	RT1082314	82 KΩ
R424	RT1082314	82 KΩ
R425	RT1082314	82 KΩ
R426	RT1082314	82 KΩ
R427	RT1056214	5.6 KΩ
R428	RT1056214	5.6 KΩ
R429	RT1056214	5.6 KΩ
R430	RT1056214	5.6 KΩ
R431	RT1056114	560Ω
R432	RT1056114	560Ω
R433	RT1056114	560Ω
R434	RT1056114	560Ω
R435	RT1056214	5.6 KΩ
R436	RT1056214	5.6 KΩ
R439	RT1033114	330Ω

REF. DESIG.	PART NO.	DESCRIPTION
R440	RT1033114	330Ω
R441	RT1033114	330Ω
R442	RT1033114	330Ω
R443	RT1082214	8.2 KΩ
R444	RT1082214	8.2 KΩ
R445	RT1082214	8.2 KΩ
R446	RT1082214	8.2 KΩ
R447	RT1010414	100 KΩ
R448	RT1010414	100 KΩ
R449	RT1010414	100 KΩ
R450	RT1010414	100 KΩ
R451	RA0104006	Semi Fixed, 100 KΩ, ±30%
R452	RA0104006	Semi Fixed, 100 KΩ, ±30%
R453	RA0104006	Semi Fixed, 100 KΩ, ±30%
R454	RA0104006	Semi Fixed, 100 KΩ, ±30%
R455	RT0510314	10 KΩ, ±5%, 1/4W
R456	RT0510314	10 KΩ, ±5%, 1/4W
R457	RT0510314	10 KΩ, ±5%, 1/4W
R458	RT0510314	10 KΩ, ±5%, 1/4W
R459	RT1039214	3.9 KΩ
R460	RT1039214	3.9 KΩ
R461	RT1039214	3.9 KΩ
R462	RT1039214	3.9 KΩ
R463	RT1018114	180Ω
R462	RT1018114	180Ω
R465	RT1018114	180Ω
R466	RT1018114	180Ω
R467	RC1022112	Solid, 220Ω, ±10%, 1/2W
R468	RC1022112	Solid, 220Ω, ±10%, 1/2W
R469	RC1022112	Solid, 220Ω, ±10%, 1/2W
R470	RC1022112	Solid, 220Ω, ±10%, 1/2W
R471	RC1022012	Solid, 22Ω, ±10%, 1/2W
R472	RC1022012	Solid, 22Ω, ±10%, 1/2W
R473	RC1022012	Solid, 22Ω, ±10%, 1/2W
R474	RC1022012	Solid, 22Ω, ±10%, 1/2W
R475	RC1022112	Solid, 220Ω, ±10%, 1/2W
R476	RC1022112	Solid, 220Ω, ±10%, 1/2W
R477	RC1022112	Solid, 220Ω ±10%, 1/2W
R478	RC1022112	Solid, 220Ω, ±10%, 1/2W
R479	GR1000501	Wire Wound, 0.5Ω ±10%, 1W
R480	GR1000501	Wire Wound, 0.5Ω ±10%, 1W
R481	GR1000501	Wire Wound, 0.5Ω ±10%, 1W
R482	GR1000501	Wire Wound, 0.5Ω ±10%, 1W
R483	GR1000501	Wire Wound, 0.5Ω ±10%, 1W
R484	GR1000501	Wire Wound, 0.5Ω ±10%, 1W
R485	GR1000501	Wire Wound, 0.5Ω ±10%, 1W
R486	GR1000501	Wire Wound, 0.5Ω ±10%, 1W
R487	RC1010012	Solid, 10Ω, ±10%, 1/2W
R488	RC1010012	Solid, 10Ω, ±10%, 1/2W
R489	RC1010012	Soild, 10Ω, ±10%, 1/2W
R490	RC1010012	Solid, 10Ω, ±10%, 1/2W
		CAPACITORS
C401	EA3350509	Elect., 3.3μF, 50V
C402	EA3350509	Elect., 3.3μF, 50V
C407	EA1060259	Elect., 10μF, 25V
C408	EA1060259	Elect., 10μF, 25V
C409	EA2270259	Elect., 220μF, 25V
C410	EA2270259	Elect., 220μF, 25V
C411	EA3350509	Elect., 3.3μF, 50V
C412	EA3350509	Elect., 3.3μF, 50V
C413	DD1630001	Cer., 30pF, ±10%
C414	DD1630001	Cer., 30pF, ±10%
C415	DD1630001	Cer., 30pF, ±10%
C416	DD1630001	Cer., 30pF, ±10%
C417	EA1060259	Elect., 10μF, 25V
C418	EA1060259	Elect., 10μF, 25V
C419	EA1060259	Elect., 10μF, 25V

REF. DESIG.	PARTS NO.	DESCRIPTION
C420	EA1060259	Elect., 10μF, 25V
C421	DD1510101	Cer., 100pF, ±5%
C422	DD1510101	Cer., 100pF, ±5%
C423	DD1510101	Cer., 100pF, ±5%
C424	DD1510101	Cer., 100pF, ±5%
C425	EA3360259	Elect., 33μF, 25V
C426	EA3360259	Elect., 33μF, 25V
C427	EA3360259	Elect., 33μF, 25V
C428	EA3360259	Elect., 33μF, 25V
C429	EA4770259	Elect., 470μF, 25V
C430	EA4770259	Elect., 470μF, 25V
C431	EA4770259	Elect., 470μF, 25V
C432	EA4770259	Elect., 470μF, 25V
C433	DF1747301	Mylar, 0.047μF, ±20%
C434	DF1747301	Mylar, 0.047μF, ±20%
C435	DF1747301	Mylar, 0.047μF, ±20%
C436	DF1747301	Mylar, 0.047μF, ±20%
C437	EA3350509	Elect., 33μF, 50V
C438	EA3350509	Elect., 3.3μF, 50V
C439	EA3360259	Elect., 33μF, 25V
C440	EA3360259	Elect., 33μF, 25V
		SEMICONDUCTORS
H401	HT306441A	Transistor, 2SC644R
H402	HT306441A	Transistor, 2SC644R
H403	HT308281C	Transistor, 2SC828R
H404	HT308281C	Transistor, 2SC828R
H405	HT308281C	Transistor, 2SC828R
H406	HT308281C	Transistor, 2SC828R
H407	HT313181R	Transistor, 2SC1318R
H408	HT313181R	Transistor, 2SC1318R
H409	HT313181R	Transistor, 2SC1318R
H410	HT313181R	Transistor, 2SC1318R
H411	HT313181R	Transistor, 2SC1318R
H412	HT313181R	Transistor, 2SC1318R
H413	HT313181R	Transistor, 2SC1318R
H414	HT313181R	Transistor, 2SC1318R
H415	HT107201R	Transistor, 2SA720R
H416	HT107201R	Transistor, 2SA720R
H417	HT107201R	Transistor, 2SA720R
H418	HT107201R	Transistor, 2SA720R
H419	HT403171P	Transistor, 2SD317P
H420	HT403171P	Transistor, 2SD317P
H421	HT403171P	Transistor, 2SD317P
H422	HT403171P	Transistor, 2SD317P
H423	HT403171P	Transistor, 2SD317P
H424	HT403171P	Transistor, 2SD317P
H425	HT403171P	Transistor, 2SD317P
H426	HT403171P	Transistor, 2SD317P
H427	HV0000705	Varistor, S-3016R
H428	HV0000705	Varistor, S-3016R
H429	HV0000705	Varistor, S-3016R
H430	HV0000705	Varistor, S-3016R
H431	HV0000705	Varistor, S-3016R
H432	HV0000705	Varistor, S-3016R
H433	HV0000705	Varistor, S-3016R
H434	HV0000705	Varistor, S-3016R
H435	HV0000705	Varistor, S-3016R
H436	HV0000705	Varistor, S-3016R
H437	HV0000705	Varistor, S-3016R
H438	HV0000705	Varistor, S-3016R
		MISCELLANEOUS
J401	YP1000039	Plug
J402	YP1000039	Plug
J403	YP1000039	Plug

REF. DESIG.	PART No.	DESCRIPTION
J404	YP1000039	Plug
J405	YP1000039	Plug
J406	YP1000039	Plug
J415	YP1000039	Plug
J416	YP1000039	Plug
J417	YP1000039	Plug
J418	YP1000039	Plug
P500	YD2845005	P.C. Board
		RESISTORS
R501	RC1082112	Solid, 820Ω, ±10%, 1/2W
R502	RC1039112	Solid, 390Ω, ±10%, 1/2W
		CAPACITORS
C501	EB4780351	Elect., 4700μF, 35V
C502	EA4770259	Elect., 470μF, 25V
C503	EA4770259	Elect., 470μF, 25V
C504	DF1710401	Mylar, 0.1μF, 50V
C505	DF1710401	Mylar, 0.1μF, 50V
		SEMICONDUCTOR
H501	HD2000510	Diode, 5B-2
		MISCELLANEOUS
F501	FS1020004	Fuse
F502	FS1020004	Fuse
J501	YP1000099	Plug
J502	YP1000099	Plug
J503	YP1000099	Plug
J504	YP1000099	Plug
J505	YP1000099	Plug
J506	YP1000099	Plug
J507	YP1000099	Plug
J508	YJ0800017	Fuse Socket
J509	YJ0800017	Fuse Socket
J510	YJ0800017	Fuse Socket
J511	YJ0800017	Fuse Socket
P600	YD2845006	P.C. Board
		RESISTORS
R601	RT1015214	Carbon, 1.5 KΩ, ±10%, 1/4W
R602	RT1015214	Carbon, 1.5 KΩ, ±10%, 1/4W
R603	RT1015214	Carbon, 1.5 KΩ, ±10%, 1/4W
R604	RT1015214	Carbon, 1.5 KΩ, ±10%, 1/4W
		CAPACITORS
C601	DD1533101	Cer., 330pF
C602	DD1533101	Cer., 330pF
C603	DD1533101	Cer., 330pF
C604	DD1533101	Cer., 330pF
C605	EM2240251	Elect., 0.22μF, 25V
C606	EM2240251	Elect., 0.22μF, 25V
C607	EM2240251	Elect., 0.22μF, 25V
C608	EM2240251	Elect., 0.22μF, 25V
		MISCELLANEOUS
S601	SP0402005	Pushswitch
J601	YP1000099	Plug
J602	YP1000099	Plug
J603	YP1000099	Plug
J604	YP1000099	Plug
J605	YP1000099	Plug
J606	YP1000099	Plug
J607	YP1000099	Plug
J608	YP1000099	Plug

REF. DESIG.	PART NO.	DESCRIPTION
J609	YP1000099	Plug
J610	YP1000099	Plug
J611	YP1000099	Plug
J612	YP1000099	Plug
		RESISTORS
R001	RN1010514	Carbon, 1 MΩ, ±10%, 1/4W
R002	RN1010514	Carbon, 1 MΩ, ±10%, 1/4W
R003	RT1027314	Carbon, 27 KΩ, ±10%, 1/4W
R004	RT1027314	Carbon, 27 KΩ, ±10%, 1/4W
R019	RG0104001	Variable 100 KΩ (A), ±20%
R020	RK0104012	Variable, 100 KΩ(A), ±20%
R021	RK0104012	Variable, 100 KΩ(B), ±20%
R022	RK0104012	Variable, 100 KΩ(B), ±20%
R023	RK0104012	Variable, 100 KΩ(B), ±20%
R024	RC1015112	Solid, 150Ω, ±10%, 1/2W
R025	RC1015112	Solid, 150Ω, ±10%, 1/2W
R026	RC1015112	Solid, 150Ω, ±10%, 1/2W
R027	RC1015112	Solid, 150Ω, ±10%, 1/2W
R028	RJ1047002	Oxide, 47Ω, ±10%, 2W
R029	GT0522501	Solid, 2.2 MΩ, ± 5%, 1W
		CAPACITORS
C001	DD1582001	Cer., 82pF, ±5%
C002	DD1582001	Cer., 82pF, ±5%
C003	DF1747351	Mylar, 0.047μF, DC600V
C004	DK1810301	Cer., 0.01 μF, +100% – 0%
C005	DK1810301	Cer, 0.01 μF, +100% – 0%
		MISCELLANEOUS
F001	FS1020004	Fuse (2A)

REF. DESIG.	PART NO.	DESCRIPTION
W001	YC0240006	AC Cord
W002	YW2845001	Wire Material
W003	YX2845001	Wire Material
S001	SS0202017	Slide Switch (MAG/CER)
S002	SR0403009	Rotary Switch (MODE)
S003	SR1203006	Rotary Switch
S004	SR0402007	Rotary Switch
S005	SP0201011	Pushswitch
L001	TS1760701	Power Transf.
M001	IN1008012	Pilot Lamp (8V)
J001	YT0204003	Terminal (PHONO,TUNER Input)
J002	YT0210002	Terminal (FRONT Input)
J003	YT0210002	Terminal (REAR Input)
J004	YL0103003	Terminal (3P)
J006	YL0301020	Terminal (Earth)
J007	YL0103001	Terminal (AC)
J008	YJ0100055	Jack (Phone)
J009	YJ0100055	Jack (Phone)
J010	YT0304004	Terminal (FRONT Spk.)
J011	YT0304004	Terminal (REAR Spk.)
J012	YJ0400018	Jack (AC Outlet)
J013	YJ0400018	Jack (AC Outlet)
J014	YJ0800012	Socket (Fuse Holder)
J015	YP1000097	Plug
J016	YP1000097	Plug
J017	YP1000097	Plug
J018	YP1000097	Plug